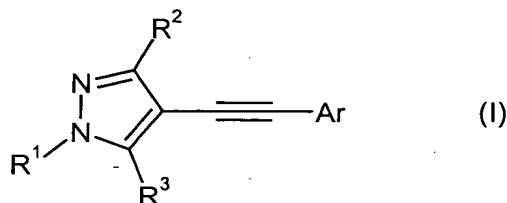


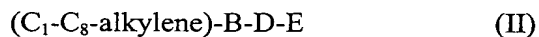
**WHAT IS CLAIMED IS:**

1. Process for preparing compounds of the formula (I)



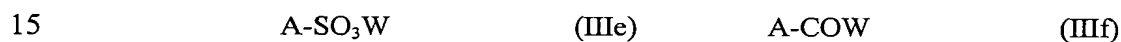
in which

- 5  $R^1$  is hydrogen,  $C_1$ - $C_{12}$ -alkyl,  $C_5$ - $C_{14}$ -aryl,  $C_6$ - $C_{15}$ -arylalkyl,  $C_1$ - $C_{12}$ -fluoroalkyl or radicals of the formula (II)



and

- 10  $R^2$  and  $R^3$  are each independently hydrogen,  $C_1$ - $C_{12}$ -alkyl,  $C_1$ - $C_{12}$ -alkoxy,  $C_5$ - $C_{14}$ -aryl,  $C_5$ - $C_{14}$ -aryloxy,  $C_6$ - $C_{15}$ -arylalkyl,  $C_6$ - $C_{15}$ -arylalkoxy, chlorine, fluorine, cyano, free or protected formyl,  $C_1$ - $C_{12}$ -fluoroalkyl,  $C_1$ - $C_{12}$ -fluoroalkylthio,  $C_1$ - $C_{12}$ -fluoroalkoxy or radicals of the formulae (IIIa) to (IIIf)



where, in the formulae (II) and (IIIa) to (IIIf),

A is absent or is a  $C_1$ - $C_8$ -alkylene,  $C_1$ - $C_8$ -alkenylene or  $C_1$ - $C_8$ -fluoroalkylene radical and

B is absent or is oxygen, sulphur or  $NR^4$  where

- 20  $R^4$  is hydrogen,  $C_1$ - $C_8$ -alkyl,  $C_6$ - $C_{15}$ -arylalkyl or  $C_5$ - $C_{14}$ -aryl and

D is a carbonyl group and

E is  $R^5$ ,  $OR^5$ ,  $NHR^6$  or  $N(R^6)_2$ ,

where

$R^5$  is  $C_1$ - $C_8$ -alkyl,  $C_6$ - $C_{15}$ -arylalkyl or  $C_5$ - $C_{14}$ -aryl and

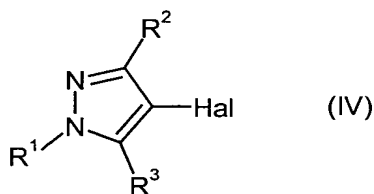
$R^6$  is in each case independently  $C_1$ - $C_8$ -alkyl,  $C_6$ - $C_{15}$ -arylalkyl or  $C_6$ - $C_{14}$ -aryl, or  $N(R^6)_2$  together is a cyclic amino radical having 4 to 12 carbon atoms and

W is OH,  $NH_2$  or OM where M is an alkali metal ion, half an equivalent of an alkaline earth metal ion, an ammonium ion or an organic ammonium ion and

Ar is a mono-, bi- or tricyclic aromatic radical having a total of 5 to 18 ring atoms, and in which at most one ring atom per cycle is selected from the group of oxygen, sulphur and nitrogen, and the mono-, bi- or tricyclic aromatic radical is optionally mono- or polysubstituted,

comprising:

- in step a), reacting the compounds of the formula (IV)

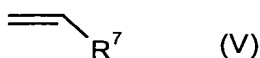


in which

$R^1$ ,  $R^2$  and  $R^3$  are each independently as defined above and

Hal is chlorine, bromine or iodine

with compounds of the formula (V)



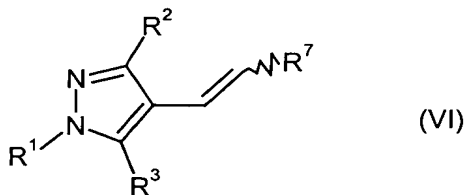
in which

$R^7$  is hydrogen, halogen, Ar or  $COOR^8$  where

$R^8$  is  $C_1$ - $C_8$ -alkyl,  $C_5$ - $C_{14}$ -aryl or  $C_6$ - $C_{15}$ -arylalkyl,

in the presence of a catalyst,

to convert them to compounds of the formula (VI)



in which

5       $R^1$ ,  $R^2$ ,  $R^3$  and  $R^7$  are each independently as defined above

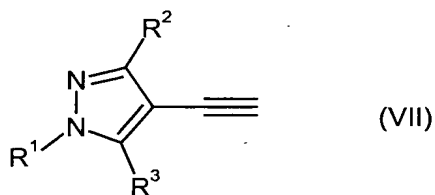
and

- in step b),

I) in the case that  $R^7$  is hydrogen, halogen or  $\text{COOR}^8$ ,

10

i) converting the compounds of the formula (VI), optionally after halogenation, by elimination to compounds of the formula (VII)



in which

$R^1$ ,  $R^2$  and  $R^3$  are each independently as defined above

and

15

ii) reacting the compounds of the formula (VII) with compounds of the formula (VIII)



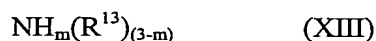
in which

Ar is as defined above and Hal is chlorine, bromine or iodine, in the presence of a catalyst to produce the compounds of formula (I),

II) and in the case that  $R^7$  is Ar, the compounds of the formula (VI) are converted to compounds of the formula (I) by halogenating and eliminating.

- 5 2. Process according to Claim 1, characterized in that  $R^1$  is hydrogen, phenyl or  $C_1$ - $C_4$ -alkyl.
3. Process according to Claim 1, characterized in that  $R^2$  is  $C_1$ - $C_{12}$ -fluoroalkyl.
4. Process according to Claim 1, characterized in that  $R^3$  is hydrogen,  $C_1$ - $C_4$ -alkyl,  $C_5$ - $C_{14}$ -aryl or radicals selected from the group consisting of:  
 $-\text{CH}_2\text{CN}$ ,  $-\text{CH}_2\text{COO}(\text{C}_1\text{-C}_8\text{-alkyl})$ ,  $-\text{CH}_2\text{COO}(\text{C}_5\text{-C}_{14}\text{-aryl})$ ,  $-\text{CH}_2\text{CONH}(\text{C}_1\text{-C}_8\text{-alkyl})$ ,  
 10  $-\text{CH}_2\text{CON}(\text{C}_1\text{-C}_8\text{-alkyl})_2$ ,  $-\text{C}(=\text{CHOCH}_3)\text{COO}(\text{C}_1\text{-C}_8\text{-alkyl})$ ,  $\text{C}(=\text{CHOCH}_3)\text{COO}(\text{C}_5\text{-C}_{14}\text{-aryl})$ ,  $-\text{C}(=\text{CHOCH}_3)\text{CONH}(\text{C}_1\text{-C}_8\text{-alkyl})$ , and  $-\text{C}(=\text{CHOCH}_3)\text{CON}(\text{C}_1\text{-C}_8\text{-alkyl})_2$ .
5. Process according to Claim 1, characterized in that Ar is a phenyl or pyridyl radical which is non-, mono-, di- or trisubstituted by radicals which are selected from the group consisting of chlorine, fluorine,  $C_1$ - $C_{12}$ -alkyl,  $C_1$ - $C_{12}$ -fluoroalkyl,  $C_1$ - $C_{12}$ -fluoroalkoxy,  
 15  $C_1$ - $C_{12}$ -fluoroalkylthio,  $C_1$ - $C_{12}$ -alkoxy, di( $C_1$ - $C_8$ -alkyl)amino, tri( $C_1$ - $C_6$ -alkyl)siloxy and radicals of the formulae (IIIa) to (IIIf) as defined in Claim 1.
6. Process according to Claim 1, characterized in that  $R^7$  is hydrogen, bromine, chlorine, COO-methyl, COO-ethyl, COO-phenyl, COO-isopropyl or COO-tert-butyl.
7. Process according to Claim 1, characterized in that 4-ethynyl-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazolyl-3,5-bis(trifluoromethyl)benzene is prepared.  
 20
8. Process according to Claim 1, characterized in that the halogenation is effected by reacting the compound of formula (VI) with bromine, chlorine or interhalogen compounds of bromine and chlorine, optionally in the presence of an organic solvent which is at least 90% inert under the reaction conditions.
- 25 9. Process according to Claim 8, characterized in that the reaction temperature in the halogenation is  $-20$  to  $150^\circ\text{C}$ .
10. Process according to Claim 1, characterized in that eliminations are carried out in an organic solvent in the presence of base.

11. Process according to Claim 10, characterized in that polar, aprotic solvents are used for the elimination.
12. Process according to Claim 10, characterized in that the bases used are: alkaline earth metal or alkali metal hydrides, hydroxides, amides, alkoxides, tertiary amines or else N-heteroaromatic compounds.
13. Process according to Claim 11, characterized in that the eliminations are carried out at temperatures of -20 to 200°C.
14. Process according to Claim 1, characterized in that, in the case of eliminations which are preceded by a halogenation, an intermediate isolation and/or purification of the intermediates is dispensed with.
15. Process according to Claim 1, characterized in that the reactions in the presence of catalysts, and optionally further in the presence of bases.
16. Process according to Claim 1, characterized in that the catalysts used are those which contain palladium.
17. Process according to Claim 16, characterized in that palladium complexes are used.
18. Process according to Claim 17, characterized in that the palladium complexes used are palladium complexes which have already been isolated or those which are generated in the reaction solution from palladium compounds and ligands.
19. Process according to Claim 16, characterized in that the molar ratio of halogen compound to be coupled to palladium is 10 to 20000.
20. Process according to Claim 15, characterized in that the bases used are amines of the formula (XIII)



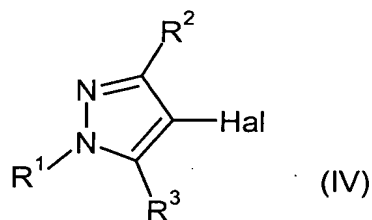
in which

m is zero, one or two and

the  $\text{R}^{13}$  radicals are each independently  $\text{C}_1\text{-C}_{12}$ -alkyl,  $\text{C}_5\text{-C}_{14}$ -aryl or  $\text{C}_6\text{-C}_{15}$ -arylalkyl, or two or three of the  $\text{R}^{13}$  radicals together with the nitrogen atom optionally form a mono-, bi- or tricyclic heterocycle having 4 to 8 carbon atoms per cycle or N-heteroaromatic

compounds and/or alkali metal and/or alkaline earth metal salts of aliphatic or aromatic carboxylic acids and/or carbonates, phosphates, hydrogenphosphates and/or hydroxides.

21. Process according to Claim 1, characterized in that the conversions of alkynes in the presence of catalyst are carried out in the presence of copper salt.
- 5 22. Process according to Claim 21, characterized in that anions of the copper salts used are halides, pseudohalides, carboxylates, perfluoroalkylsulphonates, sulphates, nitrates, carbonates or hydroxides, and/or thioether, phosphite and phosphine adducts of copper(I) salts.
23. Process according to Claim 15, characterized in that the reaction is carried out with controlled metering.
- 10 24. Process according to Claim 15, characterized in that free radical inhibitors are added.
25. Compounds of the formula (IV)

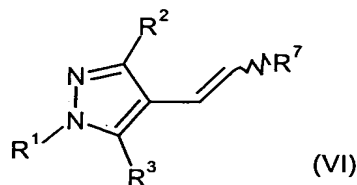


in which

R¹, R² and R³ are each as defined in Claim 1 and

15 Hal is chlorine or bromine.

26. Compounds of Claim 25 selected from the group consisting of 4-Bromo-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, and 4-chloro-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole.
27. Compounds of the formula (VI)



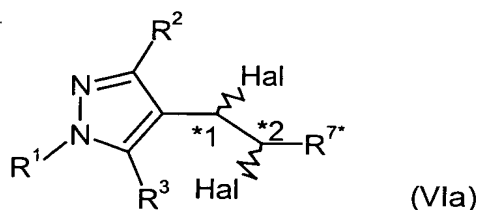
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in which

$R^1$ ,  $R^2$ ,  $R^3$  and  $R^7$  are each as defined in Claim 1.

28. Compounds of Claim 27 selected from the group consisting of 4-ethenyl-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazolyl-3,5-bis(trifluoromethyl)benzene, 4-ethenyl-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-chloroethenyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-bromoethenyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-methoxycarbonylethenyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-ethoxycarbonylethenyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole and 4-(2-isopropoxycarbonylethenyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole.

29. Compounds of the formula (VIa)



in which

$R^1$ ,  $R^2$  and  $R^3$  are each as defined in Claim 1 and  $R^{7*}$  is as defined for  $R^7$  in Claim 1, but excluding the definition of halogen for  $R^{7*}$ , and

Hal is bromine or chlorine.

30. Compounds of Claim 29 selected from the group consisting of 4-(1,2-dichloroethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(1,2-dibromoethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(1-bromo-2-chloroethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-bromo-1-chloroethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-methoxycarbonyl-1,2-dibromoethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-methoxycarbonyl-1,2-dichloroethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole, 4-(2-ethoxycarbonyl-1,2-dibromoethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole and 4-(2-ethoxycarbonyl-1,2-dichloroethyl)-1,5-dimethyl-3-(trifluoromethyl)-1H-pyrazole.
31. A process for preparing agrochemicals comprising incorporating the compounds according to Claims 25.
32. The process according to Claim 31, characterized in that the agrochemicals are insecticides and acaricides.